NEWSLETTER

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Volume 21
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Australian Society for Limnology

The **Australian Society for Limnology** is an association of over 400 people with professional and amateur interests related to Australian inland waters. Since its inception in 1961 the Society has played an important role in fostering limnological work in this country. The ASL promotes liaison between limnologists in academic, private and governmental institutions and has a vested interest in the conservation of aquatic and related resources. Annual conferences are held near centres of limnological interest, and the programme includes scientific sessions, field excursions and social activities.

The ASL produces a **Newsletter** with notes on activities, articles of general interest, book revies and conference announcements; a **Bulletin** of original scientific papers and occasional **Special Publications**. A further publication is the **Directory of Australian Limnologists.**

Membership applications are welcomed; four classes of subscribing membership are available:

Ordinary members:	$10.00
Student members:	$4.00
Institutional members:	Fees on application
Sustaining members:	Fees on application

ASL Executive 1982-83

President: David Mitchell

Past-President: Frank Burns

Vice-President: Barry Hart

Secretary/Treasurer:
Margaret Hart

Committee: The Officers of the Society and:
Angela Arthington
Ian Campbell
Max Finlayson
Roger Gaymer
Ros St Clair
Phil Suter
Russell Tait

Newsletter Editor:
R.W.G. White,
Department of Zoology,
University of Tasmania,
Box 252C, G.P.O.,
Hobart, Tasmania,
Australia 7001.

Members are entitled to receive the Australian Journal of Marine and Freshwater Research at the reduced rate of $18.00 p.a.

Membership subscriptions cover the period 1 July to 30 June but subscriptions for A.J.M.F.R. cover the period 1 January to 31 December.

Enquiries relating to membership to:

Mrs Margaret Hart,
Secretary/Treasurer, ASL,
22 Netherby Avenue,
Mulgrave, Victoria,
Australia 3170.

News & Views

GRIFFITH CONFERENCE

All members will have now received details of the Griffith Conference directly from the Secretary. Please get your replies in as soon as possible.

FIRST AUSTRALIAN ELECTROFISHING WORKSHOP

This workshop will be held at the Arthur Rylah Institute for Environmental Research from 29 April to 2 May 1983. The convenors are Peter Jackson, John Urquhart and John Beumer. The theoretical, legal, safety and pratical aspects of electrofishery will be covered. Further details from: Arthur Rylah Institute for Environmental Research, PO Box 137, Heidelberg, Victoria 3084.

SECOND AUSTRALIAN TRICHOPTERA CONFERENCE REPORT

The second Australian Trichoptera Conference was held at Mt. Buffalo in northern Victoria on the weekend of 4-5 December 1982. The meeting gave an opportunity for Trichoptera workers to socialise, discuss their work, and collect material from an interesting region of Victoria. It was generally agreed that the weekend was both enjoyable and of considerable value for disseminating information on local Trichoptera studies. A third conference is planned for early December 1983, to be held in the Grampians in western Victoria.

As well as a general discussion on the Trichoptera of Australian forest streams and a workshop session on data recording systems for Trichoptera, the following papers were presented at the conference.

Comments on the current state of taxonomic knowledge of the Trichoptera of Australia. Arturs Neboiss.
The history of species descriptions of Australian Trichoptera was outlined, and the state of taxonomic knowledge for various regions of Australia discussed. An assessment was made of the number of undescribed species in eastern Australia, and details presented of species held in museum collections awaiting description.

Functional Roles - Are they useful? Leon Barmuta.
The classification of river invertebrates into functional group categories was outlined, and the value of this approach in river community analysis was discussed.

Studies on the Trichoptera of the O'Shannassy River, Victoria. John Dean.
Details were presented of a 21 month study of the Trichoptera of the O'Shannassy River. Information was presented on species diversity, community composition, and life cycles of the more common species.

Insects of Forest streams in Tasmania and New Zealand. Frances Michaelis.
General characteristics and insect faunas of forest streams studied in New Zealand and Tasmania were detalied.

Studies on Australian Philopotamidae. David Cartwright.
The taxonomy of Australian Philopotamid larvae was discussed, and the value of the mandible for species identification was assessed. Details were presented of ecology, distribution and life histories of several Victorian species.

Antennal features of the Hydroptilidae. Alice Wells.
Adult antennal sensilla of Australian genera of Hydroptilidae were described, and used to derive a phylogeny for the group.

Studies of Notalina larvae of Victoria. Ros St.Clair.
Details of studies on the taxonomy of larvae of the Leptocerid genus Notalina were presented, and difficulties encountered tying in with adult taxomy were discussed.

FISH MEETINGS

The Fisheries Society of the British Isles is planning several scientific meetings over the next few years which should be of interest to any Australian fish biologist who might be visiting U.K. In July 1983 there will be a meeting on 'Fish Immunology'. The topic for the winter (northern!) meeting is 'Fish Genetics'. In summer 1984 there will be a international meeting on 'Fish Feeding and Nutrition'

Further details from the Meetings Secretary, Dr P. Tytler, Department of Biology, University of Stirling, STIRLING FK9 4LA, Scotland

IAN BALL VISITS ADELAIDE

Professor Ian Ball of the University of Amsterdam is visiting the Department of Zoology, University of Adelaide from November 1982 - February 1983. Professor Ball is studying freshwater turbellarians; his visit is funded, in part, by ABRS. (News from Bill Williams).

NEW AUSTRALIAN LIMNOLOGY BOOK

A new book on Australian limnology entitled 'Life in Inland Waters' written by Bill Williams will be published in May 1983 by Blackwell Scientific Publications. All you want to know about Australian freshwater life and environments! A further announcement later.

TAXONOMIC STUDY OF THE AUSTRALIAN VAGINICOLIDAE

David Seamer is working on the taxonomy of the Australian Vaginicolidae (sessile protozoans). He is keen to hear from anyone who has an interest in the tazonomy of these, or similar, animals and/or could provide access to material. David's address is 48 Owen Street, East Lindfield, Sydney 2070.

ANTARCTIC SCIENCE FORUM

The Antarctic Research Policy Advisory Committee and the Department of Science and Technology is sponsoring this forum which will be held at the Australian Academy of Science and the Australian National University. Canberra on 19-21 August 1983. Further details from:

Australian Science Forum, Conference Secretariat,
Australian Academy of Science,
PO Box 783, Canberra City, ACT 2601.

CHIRONOMID WORKER VISITS AUSTRALIA

Dr Lars Säwedal of the Zoological Institute, University of Lund, Sweden visited the Genetics Department, University of Melbourne in October 1982 to work with Jon Martin. His visit was part of a field trip down the east coast of Australia from Brisbane to Tasmania to collect Tanytarsini. He also visited Griffith University and CSIRO Division of Entomology, Canberra. After Tasmania he went to New Zealand and New Caledonia. He hopes to be able to return to Australia later this year to work at CSIRO, Canberra for about 12 months. (News from Jon Martin).

INLAND AQUATIC RESEARCH IN WESTERN AUSTRALIA

Contrary to some people's beliefs there is inland waters in Western Australia, some of it is even fresh and people actually are doing watery research (some of whom are actually ASL members).

In September 1982 a preliminary informal meeting of people interested in aquatic inland research was held at Murdoch University. Some 35 people met to eat cheese, drink wine and coffee, and to listen to a series of short talks on currentresearch. We heard:

1. Past present and future lamprey research in W.A.
   David Macey and Rob Hilliard (Murdoch University).
2. Waterbird usage of wetland reserves.
   Jim Lane (Fisheries and Wildlife).
3. Wetland and groundwater research.
   Peter Newman (Murdoch University).
4. Submerged plants in inland wetlands.
   Margaret Brock (Murdoch University)

At the December meeting again over 30 people turned up (this time at the University of Western Australia) to exchange news and views and to listen to talks on current research at the University of Western Australia:

1. Systematics of Cherax in Australia.
   Chris Austin (Zoology).
2. Boundary layers and benthic invertebrates.
   Jenny Davis (Engineering).
3. Benthic invertebrates of jarrah forest streams.
   Stuart Bunn (Zoology).
4. Seagrass in the Canning-Swan estuarine system.
   Karen Hillman (Botany).
5. Current studies on the Peel-Harvey estuary and Wilson Inlet.
   Rod Lukatelich (Botany).

We hope to continue to operate as an informal information exchange in 1983 and as part of this we aim to put together an inventory of current aquatic inland research in Western Australia. If you are planning a trip to the West and would like to meet any of us, you can make contact through the addresses below.

Margaret Brock — Life Sciences
Murdoch University
Murdoch W.A. 6150

.. Stuart Bunn Zoology
University of Western Australia
Nedlands W.A. 6009

ENGINEERING COURSES

The Department of Chemical Engineering at the University of Queensland and School of Civil Engineering at the University of New South Wales are jointly sponsoring two intensive continuing education courses in the field of water and wastewater treatment. Both courses will be held at the Boulevard Hotel, Sydney.
Details are as follows;

"Principles of Wastewater Treatment Design and Operation" -
18-22nd July, 1983

"Management of Hazardous, Toxic and Intractable Wastes" -
18-22nd July, 1983

The principal lecturers for these courses will be Professor Wes Eckenfelder from the U.S.A., Dr. Pewter Coackley from the U.K., Associate Professor David Barnes from UNSW and Dr. Paul Greenfield from University of Queensland.

Further details may be obtained from either of:

Dr. P. Greenfield
Department of Chemical Engineering
University of Queensland
ST. LUCIA Qld. 4067

Associate Professor D. Barnes
School of Civil Engineering,
University of New South Wales,
P.O. Box 1,
KENSINGTON NSW 2033

TRICHOPTERA AND AQUATIC INSECT RECORDS

Following the 1st Australian Trichoptera Conference at Melbourne 1982 and the 2nd at Mt Buffalo, Vic in 1983, in the Caddis-fly (Trichoptera) workers of Australia are getting organised.

A check-list and bibliography of the Australian Caddis-flies (Trichoptera) by Arturs Neboiss of the National Museum of Victoria is at the printer.

Data Interchange Standards are being prepared by Frances Michaelis in collaboration with the Director of the Australian Biological Resources Study (ABRS) in an attempt to standardise recording systems throughout Australia. She is receiving support from the Forest Ecology Research Fund, Hobart. Each worker will be able to fill in a card for each species record and, after expert identification, submit the record to the data bank. In the long-term, not only will species records be available Australia-wide through CSIRONET but it will be possible to map (and up-date) species distributions.

In the absence of formal stonefly (Plecoptera) and mayfly (Ephemeroptera) groups in Australia, the standards are being devised to include these orders and there is no reason why dragonfly and damselfly (Odonata) and aquatic Diptera, Coleoptera etc. should not adopt the same system.
All comments and queries welcome:
Dr. F.B. Michaelis, Consulting Biologist,

16 Lanoma St.
Launceston,
Tas. 7250.

AJMFR Contents

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Book Review

Aquatic Invertebrate Bioassays, ASTM STP 715
Eds. A.L. Burkema, Jr., and John Cairns, Jr.
American Society for Testing and Materials, 1980, 209pp.

Reviewed by Roy Swain

This book publishes the proceedings of a symposium held at Virginia Polytechnic Institute and State University, Blackburg, Va., on 27-29 September 1977, under the auspices of the American Society for Testing and Materials. Publication was delayed until 1980 by the illness of one of the editors.

The introduction states that the sympomium was held because of the inadequacies of the established "cookbooks" in the field of toxicity testing; this reference is to the two well-known proceedual guides, "Methods for Measuring the Acutei Toxicity of Elements to Aquatic Organisms" and "Standard Methods for the Examinations of Water and Wastewater". Recent years have seen a proliferation in North America in the numbers of personnel involved in toxicity testing. Many of these newcomers are untrained and it was considered that the available texts gave insufficent consideration to the biology of test organisms in relation to test design, selection of suitable organisms, or interpretation of data. I would find it hard to recommend this collection of symposium papers as an alternative to proven texts, but it could be regarded as a useful adjunct as long as the limitations of its exclusively North American approach are recognized.

The book is clearly aimed at employees of regulatory agencies and is angled throughout towards the use of bioassays for toxicity evaluation; the convienience of LC50 estimates simply as experimental end-points in studies not primarily directed towards environmental protection is ignored and not apparently recognized,

The main intent of the book is to consider the suitability of invertebrates for toxicity evaluation by reviewing test methodologies for a series of commonly employed test organisms. The book opens with a historical review of invertebrates in toxicity testing. Much of this is present as a

rather tedious catalogue, but the account of Newmann's extensive work in the 1930's on Daphnia magna is informative and acknowleges Newmann as the founder of the modern approach to test procedures. This paper is followed by a discussion of the advantages and disadvantages of invertebrates in toxicity testing. There are no suprises here but some good commonsense; Australian readers may find the paper notable for its inclusion of the only reference in the entire book to any Australian work: an incidental reference to a paper by Thorp and Lake.

The two opening general papers are followed by a series of contributions, each dealing with a specific group of organisms; four from freshwater (Daphnia, chironomids, burrowing mayflies, amphipods), two estuarine groups (copepods, molluscan larvae) and two marine groups (polychaoetes, Palaemonetes). Most authors provide detailed descriptions for the laboratory maintenance and, where possible, culturing of their particular group, as well as a protocol for its use in testing. Only the final two papers, dealing with marine species, provide original data, in both cases dealing with the problem of halogen toxicity in marine waters. Most contributions would be of pratical value to North American workers, but of much more limited value in an Australian context. Although the book sets out to provide biological information that is absent from other pratical reference guides, most authors plead the case for collecting just this information. The paucity of relevant data is particularly well demonstrated in the paper dealing with Daphnia. Even in this genus, with half a century of toxicity testing behind it, many unanswered questions remain about culturing requirements and laboratory maintenance; nutrional requirements and the development of culture healthiness indices are two priority needs. Of the other papers devoted to specific organisms I found the description of culturing techniques for burrowing mayflies (Hexagonia) most interesting and the recommendations for using polychaetes of most pratical use.

The final two contributions provide a general review of the potential of invertebrates not considered in the earlier papers and an argument for the inclusion of reference toxicants in toxicity test procedures. The first offers little but the second provides some food for thought. Reference toxicants are "materials used to relate the toxic response of a test group of the same species at another time and place". The intention therefore is to improve comparability in the results of different tests by providing a measure of the condition or sensitivity of the test organisms at the time of testing. In the most common application of reference toxicants a series of LC50 values

is obtained to establish a normal range of sensitivity for a given test species. Then, whenever tests are conducted with other toxicants, a parallel series is carried out using the reference toxicant as a 'control' to establish that the sensitivity of the test organisms is within the accepted range. Of several potential candidates considered sodium pentachlorophenate is recommended with phenol as a second choice. The need for reference toxicants, or indeed their feasibility, may be arguable but any approach which helps counteract the inherent limitations of short-term acute toxicity tests must be worth serious consideration.

However, I would have been readier to accept the arguments if an equivalent awareness had been shown for the need to standardize other aspects of a testing programme. For example, quite minor changes in water chemistry can produce dramatic variations in LC50 estimates and, without adequate control of parameters such as this, any attempts to measure the fitness of test organisms will be meaningless.

AGM Minutes

21st ANNUAL GENERAL MEETING OF THE AUSTRALIAN SOCIETY FOR LIMNOLOGY, HELD

GRIFFITH, N.S.W. 9th MAY, 1982

1. Meeting opened 4.00 p.m.

2. Agenda as circulated was adopted.

3. Apologies were received from: F Hubbard, J Powling, I Bayly, I Hiscock, A Arthington, J Blyth, L McMillan, D Pollard, L Llewellyn, R White, G Bennison, M Geddes, C Heath and B Morley.

4. Minutes of the previous meeting were accepted on the motion W D Williams, seconded G Ganf.

5. Correspondence:
M Hart reported that all correspondence was of a routine nature and had been delt with.

6. President's Report:
The past year has been a busy and interesting one for the Association and I thank the Executive Committee, and other members for their co operation in all our activities. Particularly I thank Margaret Hart for the way she has handled the difficult joint office of Secretary/Treasurer and kept our affairs in such good order.

The Executive held five meetings during the year, including one very pleasant one in Griffith in March to finalise arrangements for the 21st Congress.

John Blyth continues his good work at keeping the Victorians together with his Chapter meetings on the first Monday of every second month and with his voucher system group meetings. It has been decided that these voucher systems should be brought out progressively in a uniform format and John Blyth will co-ordinate with the Editorial Committee on this.

A number of submissions were made through the year on matters concerning the ASL as follows:

July 1981.. to the Prime Minister urging re-consideration of the decision to impose fees for second degrees. Copies were sent to Ministers for Science; Education; National Development and Energy and to the A.W.R.C., W.R.F., A.W.W.A. and I.E. Aust.

October 1981..to A.W.R.C Working Group on Water Research in Australia, putting the case for establishing six centres for Limnological Research in Australia.

November 1981..to A.W.R.C Working Group on Water Reasearch replying to a questionaire on the adequacy of existing Australian Publications for the dissemination of research results.

The following manuscripts were sent forward to the Editorrial Committee for production in the Special Publications series.

. Proceedings of Water Quality Management Symposium held at C.I.T. in February 1981,
Catalogue of Algal Cultures by Dr John Box

A special coloured advertising pamplet for displaying on notice boards to advertise the ASL Bulletin and call for papers was produced by Dr. Leighton Llewellyn.

The new grade of Life Membership was introduced with a fee of $200. This will necessitiate some alterations to our constitution.

Participation in the activities of the Academy of Science include:

...25th February 1982 attendance by myself at the meeting of Australian Societies and National Committees in Canberra.
...28th April 1982 attendance by Dr. John Kirk at a meeting at the newly formed National Committee on Plant Sciences in Canberra.
...In addition Prof. W. Williams agreed to represent ASL at a workshop of the Bicentennial History of Science in Australia Committee to be hend in Canberra August 24th-25th 1982.

As I said it has been a busy year for ASL and also a successful one thanks to Margaret Hart and our very active Committee. I thank you for the opportunity to serve you as President and wish the new President and the incoming Committee a very successful year. In conclusion I wish to thank Max Finlayson, Alan Chick and Margaret Hart for organising the Conference.

7. Secretary's Report:

M. Hart reported that there are currently 340 active members. She also thanked Helen Clauser for her assistance through out the year and also the CSIRO people for organising the Conference.

8. Treasurer's Report:

The financial report for the year was tabled and accepted by the meeting.

9. Auditors Report:

The Auditor's Report was read and accepted by the meeting. Dr. I. Hiscock was reappointed auditor for 1982/83. In response to a recommendation by the Auditor, Prof. W. Williams moved that the Treasurer be granted an annual honorium of $100, seconded Dr. D. Mitchell, Carried.

10. Editorial Committee Report:

Newsletter. Four issues of the Newsletter have been distributed since the last AGM. Vol. 19, parts 2-4 and Vol. 20, part 1. All were sent out approximately on time any hold up resulted from (a) pressure on the Editor's time; (b) the low priority the Newsletter has with the University print shop and (c) lack of copy.

I am fairly pleased with the Newsletter over the last year; I have also received several favourable comments from members. I would appreciate any feed-back members would care to make.

Dr. W. Williams and Dr. S. Lake have continued to provide information for the Newsletter and I thank them for this service.

I would be pleased to continue as Editor of the Newsletter for at least another twelve months. I have several ideas I would like to try out.

Bulletin. I feel happier about the Bulletin than I did at this time last year. The five papers for the forthcoming issue are almost completly set and I should be sending out proofs for checking shortly. The standard of the papers is high. I have received two more papers for the next issue and have been promised two others.

I will be pleased to continue as Editor of the Bulletin if the incoming Executive is agreeable to this.

Special Publications. A catalogue of Freshwater Algal Species in Culture by Dr. J. Box has been edited and should go on type setting within the next few weeks. A symposium volume on Water Quality Management is being prepared by Dr. B. Hart. An atlas of the Distributions of Freshwater Fishes of New South Wales has been received and refereed. I have recommended to the Executive that it be published.

11. Jolly Award Committee Report:

This year as in the previous three years we have a successful nomination for the Award. The Committee has unanimously decided that the Jolly Award be given to Dr. Barry Hart.

Barry is now Executive Director of the Water Studies Centre at Chisholm Institute of Technology. The Committee thinks that it is in three areas of endeavour that Barry has made significant contributions to Australian Limnology.

Barry has furthered our understanding of the behaviour of inorganic elements and compounds in our water bodies, with particular emphasis on heavy metals. And unusually for a chemist, not only for this work has he worked on field situations, but he has often displayed an awareness of the biotic implications of the chemical phenomena.

In the area of applied limnology in Australia Barry has been a forceful leader. He has lead the way in inducing water management authorities to look beyong the setting of water quality criteria for portable and commercial purposes and to realize the importance of establishing water quality criteria to protect aquatic ecosystems. His "Water Quality Criteria" of 1974 is a key work. This work and subsequent ones on water quality reveals a perceptive and versatile mind capable of getting to the core essentials of a huge amount of seemingly unrelated papers on subjects ranging from agricultural science through to fish biology.

The Committee feels that Barry has made a very significant contribution to Australian Limnology in the development of limnology as a tertiary subject. In particular we have in mind the development of the Water Studies Centre at the Chisholm Institute of Technology. This centre has been developed as a

result of Barry's enthusiasm, determination and drive. In the context of a University such a development would be a massive undertaking but in the context of a College of Advanced Education such a task has an amazing one - a super-Herculean one.

Finally Barry and his wife Margaret have both been diligent and hard-working members of the Executive of ASL and have fostered the recognition of ASL's efforts and concerns in new professional areas.

So for these reasons, on behalf of the Australian Society for Limnology, the Jolly Award Committee has much pleasure in presenting the Jolly Award to Dr. Barry Hart.

12. Student Award Committee:

The Committee Chairman, Dr. Richard Marchant, commented that the standard this year was very high indeed. The Award was made to Ms Jane Roberts for her paper "Production and Demography in Typha orientalis". All students who participated were thanked.

13. Venue for 22nd Congress:

Two venues were proposed - Griffith University, Brisbane and Darwin (in association with the Ecological Society of Australia Congress). After considerable discussion a vote was taken which resulted in a decision in favour of Griffith University. Dr. Angela Arthington has agreed to act as coordinator. The Executive to discuss Congress dates with Dr. Arthington.

14. Election of Office Bearers:

The following were elected unopposed

President	David Mitchell
Vice President	Barry Hart
Secretary/Treasurer	Margaret Hart
Committee	Angela Arthington (Qld)
	Russell Tait (Qld)
	Max Finlayson (NSW)
	Phil Suter (SA)
	Ian Campbell (Vic)
	Roger Gaymer (Vic)
	Ros. St. Clair (Vic)

15. Other Business:

a) South West Tasmania. Luisa McMillan moved, that the meeting request the incoming Executive prepare an ASL document which,

(i) describes and assesses the limnological significance of South West Tasmania

(ii) evaluates the impact on limnological developments in South West Tasmania seconded Ian Campbell, Carried.

b) Dr. S. Lake advised members that the Australian Ecological Society Congress for 1983 will be held in Darwin. The first publicity brouchers are available. Also the Pacific Congress to be held in Dunedin, New Zealand, February 1-11, 1983, will have a session on stream ecology being organised by Dr. Lake.

c) Dr. Lake asked that members approve a change in dates for the proposed Australian Academy of Sciences Boden Congress to be held on Streams from February 1983 to February 1984. Agreed.

d) Prof. W. Williams reported to the meeting on the current position regarding the Bill introduced by Mr. R. Jacobi for a National Institute for Freshwater Studies and on the recently completed A.W.R.C. Review on Water Research in Australia. Dr. D. Mitchell also outlined some of the options being considered by CSIRO in its own internal review of water research.

From the ensuring discussion a motion moved Dr. Lake, seconded Ian Campbell that "ASL lends its support to the National Freshwater Institute Bill 1981" was Carried.

e) Library: Dr. G. Ganf agreed to approach the Adelaide University library to ascertain whether they will hold and maintain the ASL library.

Constitution Changes

The folowing changes to the Society's Constitution will be put to the Members of the Australian Society for Limnology at the Annual General Meeting, 22 May, 1983.

No 8. MANAGEMENT

The Society shall be managed by an Executive Committee consisting of the President,the immediate Past President (ex officio), the Vice President and the Secretary/Treasurer, together with not less than five and no more than eight other Committee Members, all of whom shall be elected at the Annual General Meeting. This Executive Committee shall implement the Society's general business, and a simple majority shalldecide all questions at Executive Committee Meetings. If the voting is equal, a motion is lost. A quorum at Executive Meetings shall be four.

Moved by the Executive that the following alteration be made:

The Society shall be managed by a Executive Committee consisting of the President, the immediate Past President (ex officio), the Vice President, Secretary and Treasurer/Membership Officer, together with not less than five and no more than eight other Committee Members, all of whom shall be elected at the Annual General Meeting. The positions of Secretary and Treasurer/Membership Officer may be held by the one person. This Executive.....

If the motion is passed the following alterations will need to be made:

No 9. FINANCE

to read; (b) All bills or accounts shall be certified as to their correctness by the Treasurer/Membership Officer, and shall be paid by cheque. All cheques shall be signed by any two of the President, Vice President, Secretary and Treasurer/Membership Officer.

No 12. ANNUAL REPORTS

to read; An Annual Report and Financial Statement shall be submitted to the Annual General Meeting, and the financial statement shall be audited by a person appointed at the previous Annual General Meeting. In the event of the Annual General Meeting is held prior to the end of the financial year, a seperate financial statement covering the period of the financial year shall be prepared by the Treasurer/Membership Officer and.....

No 4. MEMBERSHIP

to read; (c) The register of Members and Affiliated Bodies shall be kept by the Treasurer/Membership Officer.

MEMBERSHIP

Moved by the Executive that the following be added to the constitution.
(iii) Life member shall be persons admitted to membership by the Executive Committee and who shall pay a fee set at the Annual General Meeting.

If the motion is passed the following alterations will need to be made.
No 4 (iii) to (iv); (iv) to (v); (v) to (vi) in (a)

Limnological Bibliography

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